AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) An actuated leg prosthesis for replacement of a leg of an above knee amputee, the prosthesis comprising:

a knee member;

a socket connector assembly for connecting a socket to said knee member;

~~an elongated structural~~a trans-tibial member having opposite top and bottom ends spaced apart along a main longitudinal axis;

a connector assembly for connecting ~~a terminal portion~~an artificial foot to ~~one~~said bottom end of said ~~structural~~trans-tibial member;

a first pivot assembly for operatively connecting ~~the structural~~said top end of said trans-tibial member to ~~the~~said knee member to permit relative rotation between said knee member and said ~~structural~~ trans-tibial member about a first pivot axis defined by said pivot assembly; and

a linear actuator comprising a rotary motor, a screw rotatable by said rotary motor and a follower displaceable along said screw upon rotation thereof by said rotary motor, said rotary motor being pivotally connected to said ~~structural~~trans-tibial member via a second pivot assembly defining a second pivot axis and said follower being pivotally connected to said knee member at a location spaced from said first pivot assembly and thereby defining a third pivot axis,

wherein during locomotion, rotation of said rotary motor rotates said screw in or out of said follower thereby causing a corresponding rotation of said knee member relative to said ~~structural~~trans-tibial member about said first ~~pivotal~~pivot axis and wherein relative rotation between said knee member and said trans-tibial member is about said first pivot axis only, relative rotation between said linear actuator and said trans-tibial member is about said second pivot axis only, and relative rotation between said linear actuator and said knee member is about said third pivot axis only.

Claim 2 (Currently Amended) The prosthesis according to claim 1, wherein: said actuator is connected to said knee member and said ~~structural~~trans-tibial member by respective pivotal connections having pivot axes substantially parallel to and spaced from said first axis.

Claim 3 (Currently Amended) The prosthesis according to claim 1, wherein said actuator is located within said ~~structural~~trans-tibial member.

Claim 4 (Cancelled)

Claim 5 (Currently Amended) The prosthesis according to claim 3 wherein said ~~structural~~trans-tibial member includes a hollow shell and said actuator is located within said shell.

Claim 6 (Original) The prosthesis according to claim 5 wherein said shell is formed from an open channel member and a detachable closure.

Claim 7 (Original) The prosthesis according to claim 5 wherein an energy storage module is supported on said shell.

Claim 8 (Previously Presented) The prosthesis according to claim 5 wherein a circuit board is supported on said shell.

Claim 9 (Currently Amended) The prosthesis according to claim 1, further comprising an artificial foot attached to said connector assembly, ~~the~~said artificial foot defining a front side and a rear side of the prosthesis.

Claim 10 (Currently Amended) The prosthesis according to claim 9, wherein one end of ~~the~~said actuator is connected to said knee member forwardly of said first pivot axis.

Claim 11 (Currently Amended) The prosthesis according to claim 3, wherein ~~the structural~~said trans-tibial member includes a back plate extending between ~~opposite~~said top and bottom ends ~~of said structural member~~thereof.

Claim 12 (Cancelled)

Claim 13 (Cancelled)

Claim 14 (Previously Presented) The prosthesis according to claim 9, further comprising a socket attached to said knee member.

Claim 15 (Currently Amended) The prosthesis according to claim 1, further comprising a controller for controlling ~~the~~said actuator.

Claim 16 (Original) The prosthesis according to claim 15, wherein said controller outputs control signals to said actuator in response to input signals from proprioceptors.

Claim 17 (Currently Amended) The prosthesis according to claim 16, wherein the controller has an output connected to a power drive, the power drive supplying electrical energy to ~~the~~said actuator, from a power source, in response to the control signals.

Claim 18 (Previously Presented) The prosthesis according to claim 16, wherein the input signals further comprise signals from sensors mounted on said actuator.

Claims 19-22 (Cancelled)

Claim 23 (Previously Presented) The prosthesis according to claim 1 wherein a load sensor is interposed between said actuator and one of said members to provide an indication of loads imposed on said prosthesis.

Claim 24 (Currently Amended) The prosthesis according to claim 1 including a sensor to provide an indication of relative motion between said knee member and said ~~structural~~trans-tibial member.

Claim 25 (Previously Presented) The prosthesis of claim 24 wherein said sensor is an optical sensor.

Claims 26-34 (Cancelled)

Claim 35 (New) The prosthesis of claim 1, wherein said knee member comprises an integral u-shaped member with flanges downwardly extending from an upper top plate.

Claim 36 (New) The prosthesis of claim 35, wherein said socket connector assembly provides for connecting said socket to said upper top plate of said knee member.

Claim 37 (New) The prosthesis of claim 1, wherein said first pivot assembly operatively connects said top end of said trans-tibial member to said flanges of said knee member.

Claim 38 (New) The prosthesis of claim 1, wherein said a trans-tibial comprises an open channel member between said top and bottom ends thereof having spaced apart walls, said second pivot assembly being pivotally mounted to said spaced apart walls of said open chamber member.